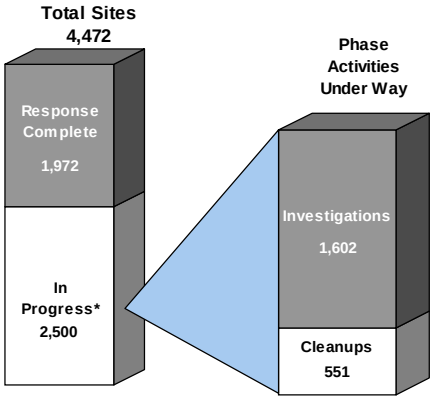
NAVY

Cleanup Status and Progress

"Open and cooperative decision-making with regulators and communities is an important tool for success in our environmental programs. Successful partnering efforts make better use of cleanup money by promoting communication and teamwork among diverse interests, reducing the time between study and actual cleanup of contamination, and sustaining performance of the overall cleanup effort."

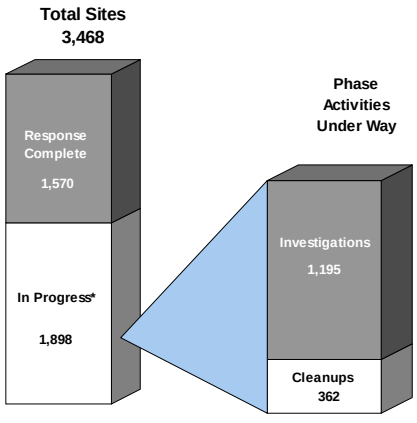
— Robert B. Pirie, Jr., Assistant Secretary of the Navy (Installations and Environment)

Active and BRAC Site Status as of September 30, 1998

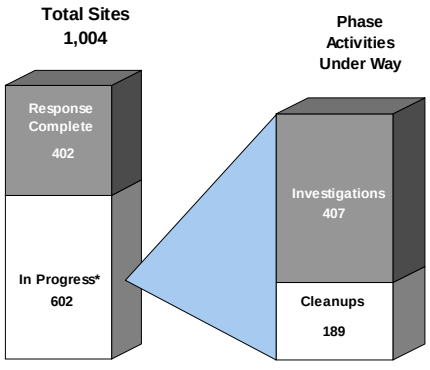


The Department of the Navy (DON) continues to make substantial progress toward completion of its Environmental Restoration Program in the face of unusual and complex challenges. Some of those challenges are directly associated with the DON mission and related operational factors. Most Navy and Marine Corps installations are located in coastal areas, which generally have environmentally sensitive habitats and populous surrounding communities. The heavily industrialized operations that typically exist at naval installations to support ships and aircraft

Active Site Status as of September 30, 1998



BRAC Site Status as of September 30, 1998**



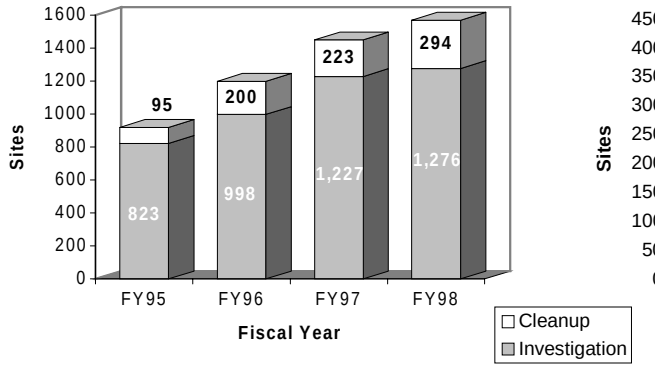
*NOTE: IN-PROGRESS INCLUDES SITES WHERE ACTIVITIES WILL BE UNDER WAY IN THE FUTURE. THEREFORE, TOTALS OF SITES WITH PHASE ACTIVITIES UNDER WAY ARE GENERALLY LESS THAN THE TOTAL NUMBER OF SITES IN PROGRESS.

**PROGRESS FROM FY97 TO FY98 WAS AFFECTED BY REGULATORS' REOPENING OF NUMEROUS SITES THAT WERE CONSIDERED RESPONSE COMPLETE BY THE NAVY.

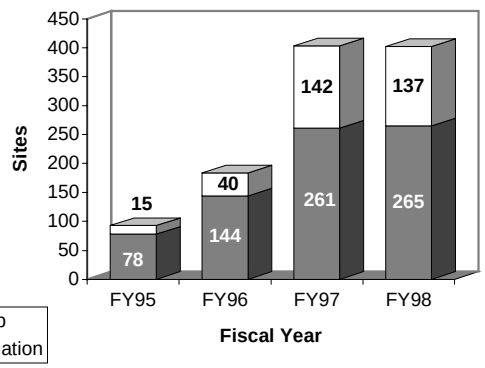
add to the complexity of cleanup. Installations slated for closure or realignment also have a significant impact on the program, particularly in the areas of land reuse and fast-track cleanup.

To date, DON has identified 4,472 potentially contaminated sites at 241 installations. Of these sites, 1,972 require no further action. Restoration activities are planned or under way at 2,500 sites. The Navy has completed final Remedial Actions at 544 sites. Of these sites, 134 require Remedial Action Operations. Interim Actions have been completed at 881 sites. In FY98, the Navy completed 189 Interim Actions at active sites, bringing the total number of completed Interim Actions at active sites to 849 at 614 sites. By the end of fiscal year 1998 (FY98), 1,570 of the 3,468 potentially contaminated active sites at Navy and Marine Corps installations had been brought to Response Complete status through cleanup actions or verification that no cleanup action was required. During FY98, 95 active sites were brought to Response Complete status through cleanup activities; 54 active sites were determined to be Response Complete or to require no further action based on appropriate investigation and analysis. Analysis or cleanup actions are in progress at the 1,898 remaining sites. Thirty-nine percent, or 748, of these sites are categorized as high relative risk. Cleanup at Navy's active installation sites is now funded by the Navy's Environmental Restoration Account (ER, Navy).

Active Sites with Response Complete*



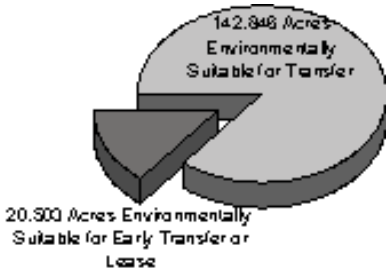
BRAC Sites with Response Complete*†



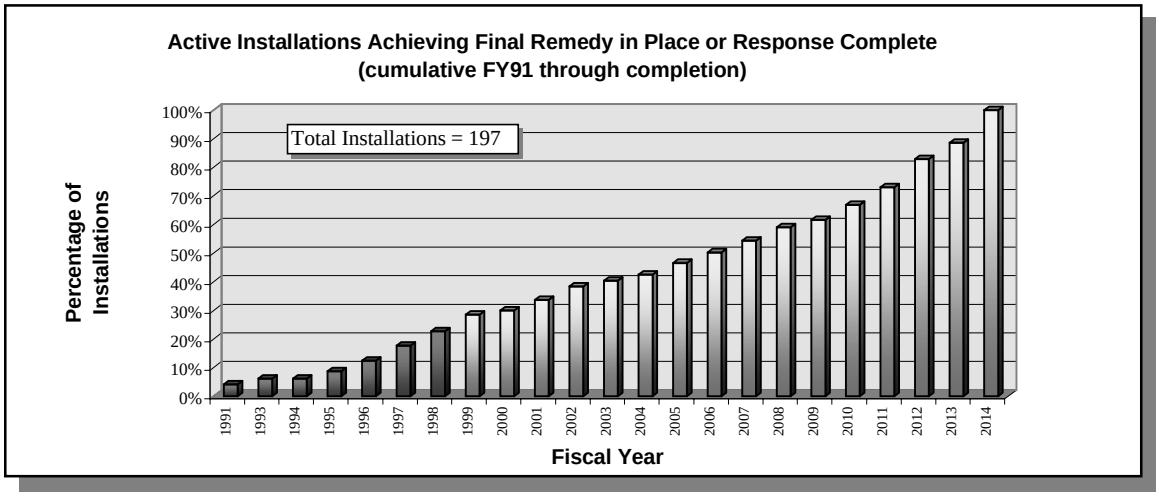
*SHOWS SITES THAT HAVE ACHIEVED RESPONSE COMPLETE DIRECTLY FROM THE INVESTIGATION AND CLEANUP PHASES
†CLEANUP AND INVESTIGATION CATEGORIES CHANGED FROM FY97 TO FY98 BECAUSE REGULATORS REOPENED NUMEROUS SITES.

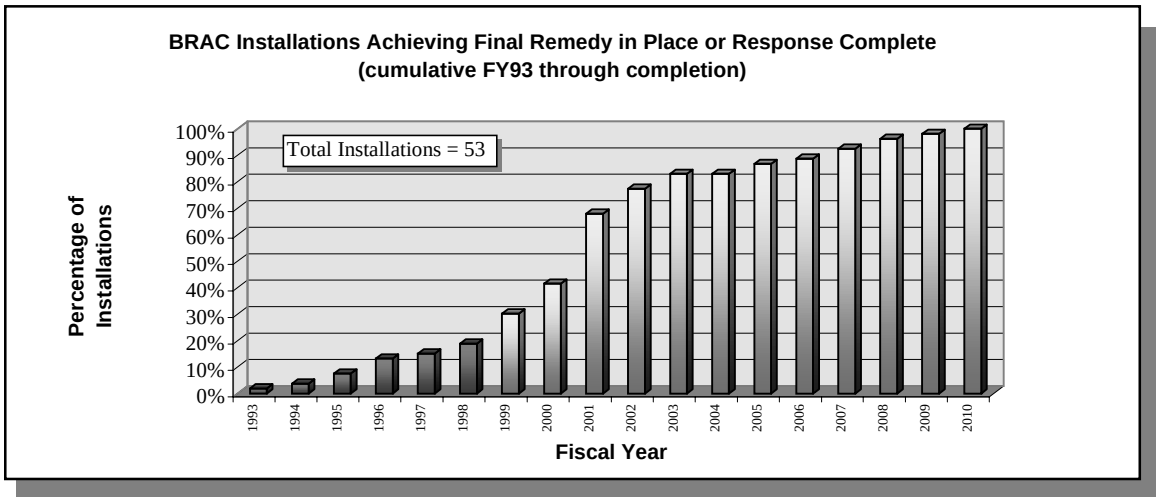
The Base Realignment and Closure (BRAC) 1988, 1991, 1993, and 1995 lists include 53 Navy and Marine Corps installations. Navy installations have formed 41 BRAC cleanup teams to support cleanup. Local Redevelopment Authorities have completed reuse plans at 42 Navy BRAC installations. Reuse plans have been initiated at six additional installations. Environmental Baseline Surveys, as well as BRAC Cleanup Plans, have been completed for all BRAC fast-track installations. Approximately 163,349 acres are in excess to the Navy. Excess property is

Environmental Condition of BRAC Property



available at 43 installations. At the end of FY98, 88 percent of the property at the Navy's BRAC fast-track sites had been determined to be environmentally suitable for transfer. Of the 1,004 Navy BRAC sites, 402 are Response Complete. Investigations or cleanup actions are in progress at the 602 remaining sites. During FY98, 41 BRAC sites were brought to Response Complete status through cleanup activities, and 41 BRAC sites were determined to be Response Complete or to require no further action based on appropriate investigation and analysis. Also in FY98, the Navy completed 120 Interim Actions at BRAC sites, bringing the total number of Interim Actions completed at BRAC sites to 372 at 267 sites.





Goals and Priorities

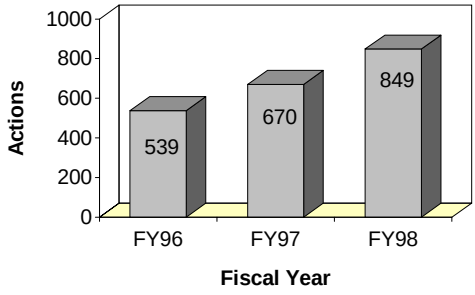
DON's program goals and priorities are based principally on a risk management or risk-plus approach, which considers the risk assigned to sites through DoD's Relative Risk Site Evaluation framework along with other risk management factors, such as reuse (for BRAC properties), legal requirements, economic considerations, and stakeholder concerns. For completion of its Environmental Restoration Program, DON endorses a

stable-funding approach that is consistent with achieving the restoration goals outlined in the Defense Planning Guidance. At active and closing installations, the cost to complete the Environmental Restoration Program for the Navy and the Marine Corps is now estimated at approximately $4.22 billion (this estimate does not include program management costs). This amount, plus the $1.3 billion spent from FY96 to FY98, is $2.1 billion less than the $7.63 billion anticipated cost-to-complete projected at the beginning of FY96.

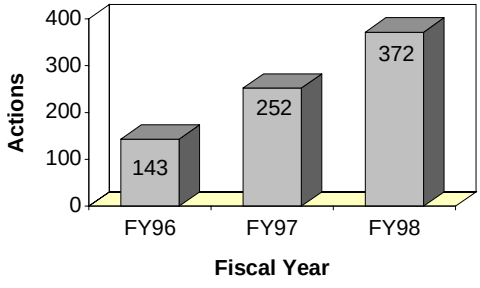
DON's goal is to spend at least 70 percent of its total program budget, or about 80 percent of the amount directly chargeable to project work, on high-relative-risk sites. This goal puts the proper emphasis on relative-risk reduction while allowing appropriate flexibility for addressing stakeholder concerns and other risk management considerations. Other elements informing the Navy's risk management philosophy are the need to expedite cleanup of BRAC property slated for reuse and the need to plan for, and take advantage of, projects that provide economies of scale. Economies of scale are achieved by addressing similar, proximate sites in a coordinated way as part of the same project, instead of initially addressing only high-risk sites and then addressing related low-risk or medium-risk sites individually. In such cases, flexible management allows medium- and even low-relative-risk sites to be included in the project along with the high-relative-risk site(s) that are given top budgetary priority. DON also has an initiative under way to accelerate the cleanup or closure of all sites at installations that have only a few, generally less complex, sites. This initiative is geared toward closing out the restoration program at these installations. By doing this, DON will avoid costs by eliminating the continued overhead associated with maintaining a program at the installations.

DON continues to emphasize accomplishing cleanups, while maintaining the necessary level of investment in site analysis. The DON goal is to spend at least 60 percent of its total program budget on actual cleanup. This goal was exceeded in FY98, when 61 percent of the total program funding was spent on cleanup. Continued use of Interim Remedial Actions and Removal Actions is helping DON achieve these aggressive cleanup goals.

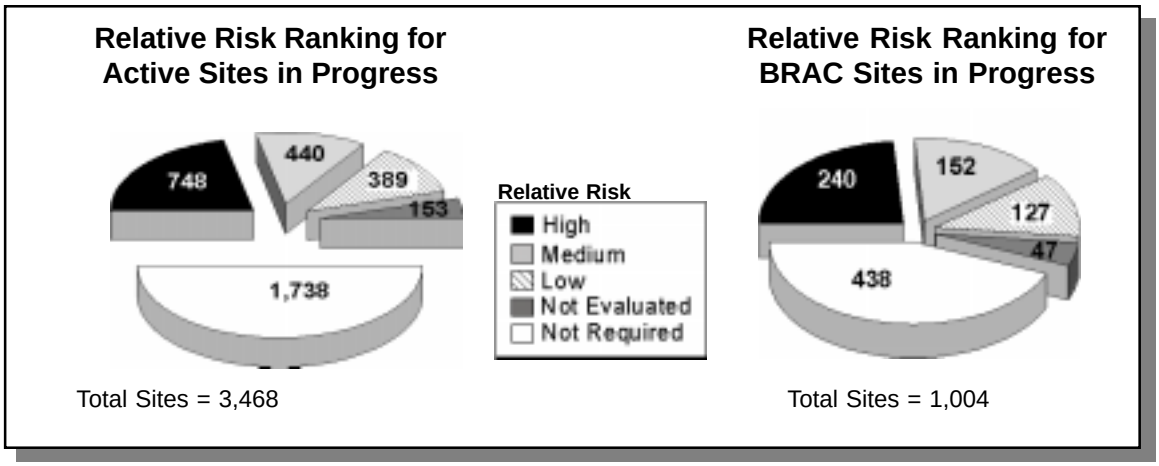
Cumulative Interim Actions Completed at Active Sites



Cumulative Interim Actions Completed at BRAC Sites*



*BRAC FY96 AND FY97 TOTALS HAVE BEEN UPDATED SINCE THE PREVIOUS ANNUAL REPORT TO REFLECT NEW AND REVISED NAVY DATA AS OF FY98.



Relative Risk Evaluation

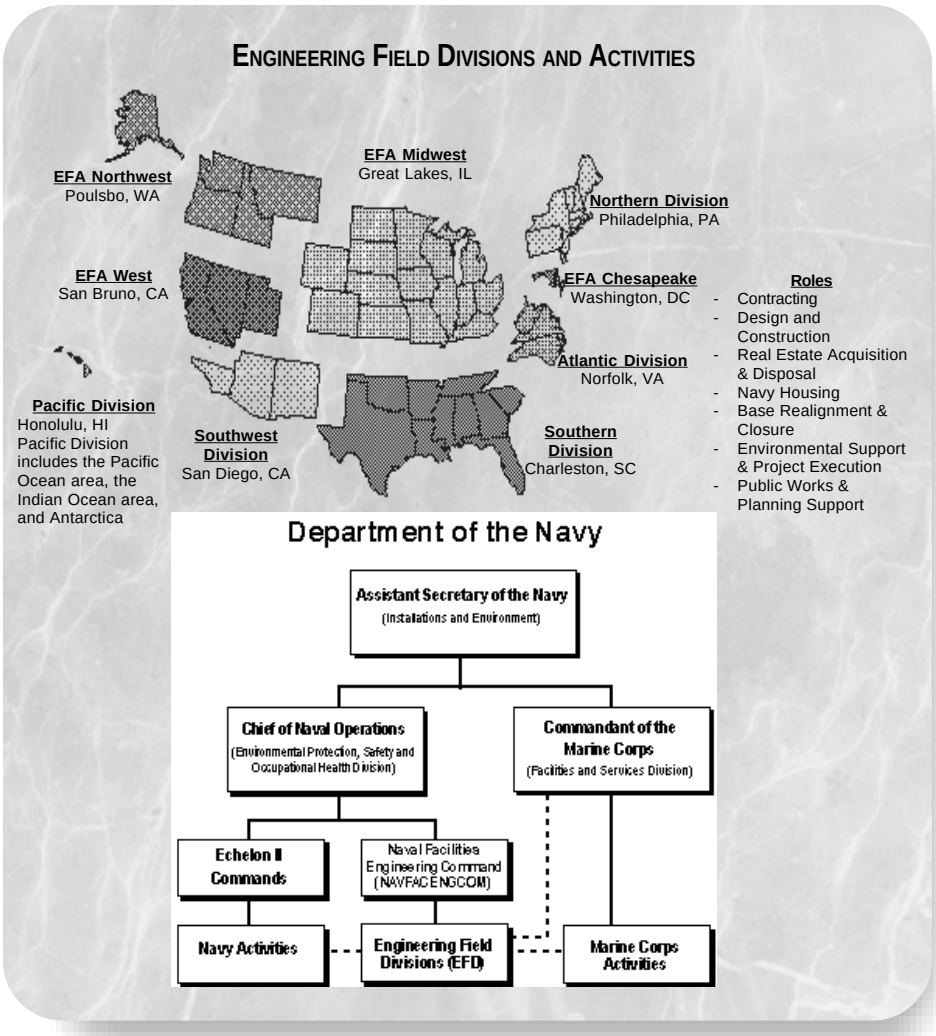
During FY98, DON reduced the number of sites that had not been evaluated for relative risk from 231 to 200. The remaining unevaluated sites are new sites that will be evaluated in FY99 or existing sites that do not require evaluation or cannot be evaluated because of technical considerations in the DoD Relative Risk Site Evaluation model.

Organization

DON executes its Environmental Restoration Program through the Naval Facilities Engineering Command (NAVFAC) and its eight Engineering Field Divisions and Activities (EFD / As) nationwide. Remedial project managers (RPMs) are assigned for each installation in each geographic region covered by an EFD / A. The RPMs reside at the EFD / As but work closely with the installations and the regulators in planning, setting priorities, establishing budgets, and coordinating project execution. Contracting, technical coordination, direction, and execution of the work are centrally managed by the RPMs and the support staff at the EFD / As. Installations generally take the lead in community relations, outreach, and public involvement and maintain ultimate responsibility for their respective restoration programs.

The regionally centralized approach offered by the EFD / As provides DON with a number of benefits, including consistency, the ability to take advantage of efficiency, and economies of scale. Some of these benefits can be seen in the very successful partnering efforts among EFD / As, the U.S. Environmental Protection Agency (EPA) regions, and the states. The regional approach allows partnering efforts to be especially well coordinated and efficient and helps maintain program continuity over time.

Other benefits of the regional approach are consistency in policies and guidance, management and technical approaches, and planning and priority-setting within a given EPA region; enhanced communication and sharing of information and lessons learned among RPMs; and efficiencies and economies of scale in contracting and other resource-support activities.



Management Initiatives and Improvements

The Navy continues to use the NORM data management and information system. This system, which is based on a design that normalizes the various data collected and reported for the Environmental Restoration Program, has consolidated and improved system requirements and capabilities that previously were contained in multiple stand-alone databases. NORM eliminates the duplication of effort that was inherent in the previous systems, providing an integrated data management and collection process that not only serves reporting requirements but also provides an accessible, useful tool for field personnel. NORM was used to develop the FY99 and FY00 DON budgets and has improved the quality and timeliness of data, increasing DON's ability to plan and to allocate resources.

In addition, the Navy continues to rely on the DON 5-Year Environmental Restoration Plan as an important planning, communication, and management tool. Published annually, the 5-year plan helps DON communicate its successes to installation personnel, regulatory agencies, and the public.

WorldWideWeb
The Department of the Navy (DON) 5-Year Plan
http://5yrplan.nfesc.navy.mil/

Information and Technology Transfer

The area of information and technology transfer remains one of DON's strengths. The Naval Facilities Engineering Command directly coordinates the various installation restoration technology transfer efforts within its command and field offices, with technical support provided by the Naval Facilities Engineering Service Center (NFESC). The key groups in DON's technology transfer effort are NFESC, the Navy Environmental Leadership Program (NELP), and the Alternative Restoration Technology Team (ARTT).

WorldWideWeb
Navy Environmental Leadership Program (NELP)
http://nelp.navy.mil

NFESC provides DON with specialized engineering, scientific, and technical products and services and is oriented toward the transfer of technology through consultation and technical assistance, patent license agreements, cooperative research and development agreements, and direct rapid response to requests for support. It continues to be the hub of the Navy's innovative environmental remedial technology demonstrations, evaluations, and technology information transfer efforts. Three important NFESC-led activities are the Cleanup Review Tiger Team, solicitation and use of private-sector technology input, and technical seminars at the EFD / As.

WorldWideWeb
Naval Facilities Engineering Service Center (NFESC)
http://www.nfesc.navy.mil/

Since FY96, NFESC has led technology application peer reviews, known as the Cleanup Review Tiger Teams, at each EFD / A. This review effort includes discussions with 150 RPMs who are responsible for approximately 460 sites. The reviews focus on high-cost projects, where use of innovative technologies and approaches is most likely to produce quality improvements. The teams make site-specific findings and recommendations, as well as general recommendations for improving the quality and performance of the DON

Environmental Restoration Program. Tiger Team reviews were conducted in FY97 and FY98. The findings and recommendations of the Tiger Team effort have improved program execution, reduced remediation costs at numerous sites, and accelerated environmental cleanup efforts. Future efforts of the Tiger Team will focus on complex anticipated issues such as ecological risk assessment and cost-effective site closeout.

Since FY97, NFESC also has promoted the use of private-sector innovative technological advances within the Navy, with the semiannual issuance of a Broad Agency Announcement (BAA) in the *Commerce Business Daily*. This program encourages vendors, especially smaller companies and innovators, to submit abstracts on their innovative environmental technologies to the Navy for potential demonstration throughout the EFD / As. Technologies submitted for review are evaluated, and those that match the needs of specific sites proceed to the demonstration phase. Currently, 3 demonstration projects are complete and 14 projects are in progress. The BAA program has been very useful and will continue into the foreseeable future.

The NFESC also conducts annual technical seminars at the Engineering Field Divisions and Engineering Field Activities, presenting the latest remedial technologies and tools. Remediation Innovative Technologies Seminars (RITS) in FY97 and FY98 focused on low-temperature thermal treatment, small-arms ranges, alternative methods of landfill capping, permeable reactive walls, surfactant-enhanced aquifer remediation, phytoremediation, constructed wetlands, and air sparging. These seminars have been instrumental in providing RPMs with technical information on innovative technologies and giving them the latest tools for implementing these technologies at their sites.

Another important contribution to DON's technology transfer initiatives is the Naval Environmental Leadership Program, located at Naval Station Mayport, Florida, and Naval Air Station (NAS) North Island, California. NELP is instrumental in developing and demonstrating cost-effective, innovative environmental technologies that can be transferred to, and adopted at, other DoD installations.

Where NELP concentrates on developing and demonstrating new technologies, the ARTT, which consists of various technical managers and representatives and organizations throughout the DON chain-of-command, focuses on their application. The ARTT's mission is to promote the use of innovative technologies for effectively closing out sites while protecting human health and the environment. The team is responsible for the following activities:

- Identifying barriers to implementing innovative technologies
- Recommending process changes that will eliminate or minimize the impact of barriers to implementing technologies
- Proposing policies and procedures for developing and implementing new technologies
- Developing and recommending initiatives and strategies that support use of innovative technologies
- Identifying potential sites and innovative technologies for demonstrations.

In FY98, the ARTT developed a monitored natural attenuation (MNA) protocol in collaboration with the U.S. Geological Survey. This protocol provides NAVFAC RPMs with user-friendly, step-by-step guidance on the use of MNA.

Outreach

Public outreach and stakeholder participation are critical to the success of DON's efforts to responsibly address cleanup issues at Navy and Marine Corps installations. DON's strong support of community outreach is evidenced by its commitment to providing meaningful opportunities for public participation. DON has established Restoration Advisory Boards (RABs) at more than 100 active and closing Navy and Marine Corps installations and seeks other opportunities, such as installation open houses, presentations to service clubs, and sponsorship of environmental education in local schools, to encourage community involvement.

DON continues to lead the way in the Technical Assistance for Public Participation (TAPP) arena. In FY97, it conducted a successful pilot TAPP project at Naval Air Station North Island, California. Once TAPP became official, in February 1998, the Navy initiated DoD's first TAPP assistance contract at NAS Alameda, California. The TAPP application for NAS Alameda was turned around in a matter of days to ensure timely procurement of technical services for the Alameda RAB. This process was a win for both the Navy and the community.

Further illustrating DON's support for stakeholder involvement are DON's groundbreaking negotiations with Native American tribes in the state of Washington on provision of technical assistance on local cleanup issues.

Working with citizens and regulators alike, the Navy will continue to embrace stakeholder advice and contributions in resolving issues and improving the DON cleanup program.

Funding

In FY98, the Navy obligated $275.5 million in Environmental Restoration funds to active installations. Funding levels will decline slightly, to $273.6 million, in FY99. With adjustments for inflation, the FY00 funding level is projected to be $284 million.

In FY98, approximately 61 percent of Navy Environmental Restoration funds was spent on design work, interim or final cleanup actions, and operation and maintenance. By FY00, the proportion of program funds expended for cleanup activities is expected to increase to 64 percent.

In FY98, the Navy obligated $245.5 million in Environmental Restoration funds, not including compliance or planning, to BRAC installations. The planned BRAC funding levels for FY99 and FY00 are $215.3 million and $270.8 million, respectively.

Navy Environmental Restoration Funding Profile (in millions of dollars)

FY97 ER, Navy Funds Executed

Total = $287.1 million

FY98 ER, Navy Funds Obligated

Total = $275.5 million

FY99 ER, Navy Execution Planned

Total = $273.6 million

FY00 ER, Navy Planning Estimate

Total = $284.0 million

NOTE: FOR BRAC FUNDING INFORMATION SEE FIGURE 22 ON PAGE 34.